

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the reasons that follow.

Claims 1, 11, 24, 132-136, 139, and 148 are currently amended by the instant communication. Claims 170-197 are newly added. No new matter is added by the instant amendments. Support for the claim amendments and the new claims can be found throughout the Specification. For example, support for DNA polymerase with a normal level of exonuclease activity and a DNA polymerase modified to have reduced 3' to 5' exonuclease activity can be found at page 5, lines 13-22; Examples 1-4 and 6 of the application as filed. Support for the requirement of diphosphokinase, an inorganic pyrophosphatase, an ATP regeneration system, double stranded exonuclease, and a ligase can be found at page 5, lines 13-22; page 7, lines 16-28; Example 2 of the application as filed. Support for chemical additives such as potassium glutamate, DMSO and dextran polymer can be found at page 7, lines 25-28 of the application as filed. Support for exponential amplification can be found at page 3, lines 27 through page 4, line 21; page 6, lines 10-25; and Example 3 of the application as filed.

Claims 129, 140, 156, 160, 165, 166, 168, and 169 are cancelled without prejudice. Applicants reserve the right to pursue any subject matter cancelled by way of the instant amendments in this application or in continuation or divisional applications. After amending the claims as set forth above are entered, claims 1, 11, 24, 124-128, 130-139, 141-155, 157-159, 161-164, 170-197 are pending and under examination in this application. The present status of all claims in the application is provided in the Listing of Claims, beginning on page 2 of this communication.

Rejection of claims under 35 USC § 103

In order to establish a prima facie case of obviousness, the Examiner must demonstrate that the prior art (i) teaches or suggests every claim limitation, (ii) provides a motivation to combine (or modify) the teachings of the selected references, and (iii) provides a reasonable

expectation of success. *In re Vaecck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP § 2143. Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)). Thus, in order to establish a *prima facie* case of obviousness, it is necessary for the Examiner to identify the reasons why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed. The proper analysis when determining obviousness includes consideration of the scope and content of the prior art; the level of ordinary skill in the prior art; the differences between the claimed invention and the prior art; and objective evidence of nonobviousness.

The instant claims each require isothermal methods of amplifying a template DNA molecule in which no exogenously added primers are required and in which an amount of amplified product is produced that is at least 10- or 100-fold over the input template DNA (dependent claims further require an increase of at least 1,000-, 1,000,000- or 10,000,000-fold). Claim 1 specifically requires an isothermal method of amplifying a template DNA molecule that involves a reaction mixture that includes a DNA polymerase and at least two accessory proteins, wherein the method is performed under conditions such that the amount of amplified product is at least 100-fold greater than the amount of template DNA put into the mixture; claim 11 specifically requires an isothermal method of amplifying a template DNA molecule that involves a reaction mixture that includes DNA polymerase with a normal level of exonuclease activity, a DNA polymerase modified to have reduced 3' to 5' exonuclease activity, a helicase, a primase, and a single stranded DNA binding protein; and claim 24 specifically requires an isothermal method of amplifying a template DNA molecule that involves a reaction mixture that includes wild-type T7 DNA polymerase and a T7 DNA polymerase modified to have reduced 3' to 5' exonuclease activity, a 63-kDa form of a gene 4 protein from bacteriophage T7 and a single-stranded DNA binding protein from *Escherichia coli*.

As discussed below, the obviousness rejections fail at least because the cited art, alone and in combination, fails to disclose, teach or suggest any method that meets the specific combination of requirements recited by the instant claims, and there is nothing to motivate one of ordinary skill to make the modifications to the cited art that would be required to arrive at the instantly claimed methods. Moreover, even if there were motivation to modify the references in the manner required to arrive at the instant claims (there is not), without the experiments first provided in the instant application (for example, the experiments described in Examples 1-3) there would be no reasonable expectation that the amount of amplification recited in the claims (i.e., at least 10-, 100-, 1,000-, 1,000,000- or 10,000,000-fold amplification) could be achieved in a constant temperature reaction system free of exogenous primers as required by the instant claims.

The Combination of Scherzinger with Sorge fails to Support Obviousness of a Method Involving a 10-fold or Greater Amplification of DNA Without Exogenous Primers

Each of the obviousness rejections rely on the combination of Scherzinger with Sorge. Scherzinger is an academic article focusing on fundamental mechanisms underlying DNA replication and polymerase action. The Scherzinger article focuses on mechanisms of DNA synthesis that occur as part of normal cellular function, and does not relate to methods of producing amplified DNA products. The mechanisms disclosed in Scherzinger result in at most a 4-fold increase in the template DNA. Sorge discloses methods for DNA amplification that, similar to other traditional prior art amplification technologies, require the addition of exogenously added oligonucleotide primers. The Sorge methods do include the use of a combination of a DNA polymerase with a normal level of exonuclease activity and a DNA polymerase modified to have reduced 3' to 5' exonuclease activity.

The combination of Scherzinger with Sorge fails to support an obviousness rejection for numerous reasons including those discussed below.

First, because the Scherzinger reference relates to an academic investigation of DNA replication and not to methods of amplifying DNA to produce amplified products, there is nothing in the reference that would motivate one to modify the disclosures to increase the yield

of amplified products. If one were to seek a method of amplifying DNA for the purpose of obtaining amplified DNA products, then one would most likely start with methods such as Sorge that use exogenously added primers and PCR temperature cycles that are well known to be effective in amplifying DNA, rather than the Scherzinger disclosures that result in only a 4-fold increase in DNA. The Examiner provides nothing that would motivate one to attempt to achieve the claimed levels of amplification (i.e., 10-, 100-, 1,000-, 1,000,000- or 10,000,000-fold amplification) under the claimed conditions, for example at a constant temperature and without adding exogenous primers. Moreover, the fact that Sorge specifically indicates that the methods disclosed therein **require** exogenous primers (see, for Example, Sorge at column 2, lines 39-41, Dr. Tabor's February 2009 declaration at ¶ 8, and Second Tabor Declaration at ¶ 7) would motivate one of ordinary skill *against* combining the Sorge amplification methods with the primer-free Scherzinger replication methods.

Second, even if one were to be motivated to try to achieve the claimed levels of amplification in a reaction system free of exogenous primers (as described above, the cited art provides no such motivation), without the benefit of hindsight provided by the experiments first reported in the instant application those of ordinary skill in the art would have no reasonable expectation that the claimed levels of amplification (i.e., at least 10-, 100-, 1,000-, 1,000,000- or 10,000,000-fold amplification) could be achieved. See Dr. Tabor's February 2009 Declaration at ¶5 and 7, and the Second Tabor Declaration at ¶4-7. In this regard, the cited art (e.g., Scherzinger) discloses at best a 4-fold amplification. As Dr. Tabor explains in his declarations even if one were to try to modify such primer-free reactions to increase DNA yield, there would be no reason for one of ordinary skill to expect that any such modifications (other than adding exogenous primers) could possibly result in an increase sufficient to result in a 10-fold amplification, much less a 100-fold amplification required by, e.g., claim 1 or the 1,000-fold or greater amplification required by the dependent claims. See Dr. Tabor's February 2009 Declaration at ¶5 and 7, and the Second Tabor Declaration at ¶6. Thus, the Tabor declaration establishes that the difference between the 4-fold yield of the Scherzinger reactions and the 10-, 100-, 1,000-, 1,000,000- or 10,000,000-fold amplification yields required by the instant claims would not be understood by those of ordinary skill in the art to be trivial differences that could be

overcome by routine optimization, and that the ability to obtain the claimed amounts of amplified product under the claimed conditions (i.e., without the addition of exogenous primers) was truly unexpected in view of the art at the time the application was filed (thus undermining the Examiner's assertion that the Tabor declaration allegedly fails to establish what is unexpected).

The Examiner further bases the obviousness rejection on the assertion that the evidence of non-obviousness is allegedly not commensurate with the scope of the claims. As discussed above, the instant claims distinguish the cited prior art by requiring, *inter alia*, an amplification method that does not need exogenous primers, yet can unexpectedly amplify DNA to produce an amount of amplified product that is at least 10-, 100-, 1,000-, 1,000,000- or 10,000,000-fold greater than the input template DNA (each of the claims require additional elements such as the use of at least two accessory protein, the absence of a terminal protein bound to the 5' end of the template DNA molecule, and performing the amplification reaction at a constant temperature). As explained above, the Examiner has not identified any art that discloses, teaches or suggests such a method; and therefore, contrary to the Examiner's assertions, the breadth of each of the instant claims is commensurate with the surprising findings first disclosed in the application.

Moreover, the Second Tabor Declaration provided herewith explains that those of ordinary skill in the art reading the examples and specification and the dramatic levels of DNA amplification described in the application would immediately recognize that the claimed levels of DNA amplification (for example a 10-fold, 100-fold or greater amplification) of the instant application could be achieved using a wide range of constant temperature exogenous primer-free reaction systems in accordance with the claims—for example in reaction systems involving various types and amounts of DNA polymerases, various types and amounts of accessory proteins as well as other variations. Second Tabor Declaration at ¶5. Moreover, Dr. Tabor explains that using the application as a guide, those of ordinary skill in the art could make readily adjust types and amounts of various components in the reaction systems and achieve the 10-, 100-, 1,000-, 1,000,000- or 10,000,000-fold amplification as required by claims without undue

burden or experimentation. Second Tabor Declaration at ¶5. Accordingly, the Second Tabor Declaration clearly establishes non-obviousness of the entire scope of the claims.

With regard to the Examiner's reference to MPEP § 716.02(d) and the specific *Clemens* case cited therein, the instant facts are actually comparable to claim 8 mentioned in the section of *Clemens* cited in the MPEP as being non-obvious over the prior art. Specifically claim 8 in *Clemens* required conditions in which ion exchange resins needed to work at a temperature in excess of 100 degrees (it was unexpected that the resins could work at such temperatures), whereas the prior art established that exchange resins were known to perform well at 60 degrees. The quoted section of *Clemens* indicates that claim 8 was held non-obvious, whereas claims encompassing the lower 60 degree temperatures of the prior art were held obvious. Accordingly, similar to *Clemens* claim 8 that required a temperature that was higher than was believed would work, the instant claims require 10-, 100-, 1,000-, 1,000,000- or 10,000,000-fold amplification that is surprisingly higher than the 4-fold amplification of the cited prior art. Thus, if anything, the *Clemens* case would support rather than refute the non-obviousness of the instant claims. Moreover, there is nothing in MPEP § 716.02(d) or the *Clemens* case supporting the Examiner's attempts to require specific additional claim elements under the alleged authority of 35 U.S.C. § 103.

Regardless, the instant claims do recite the ingredients included in the reaction mixtures of Examples 1 and 2. In this regard, Example 1 included T7 DNA polymerase, exonuclease deficient T7 DNA polymerase (i.e., Δ28 T7 DNA polymerase), T7 63-kDa gene 4 protein and *E. coli* SSB; each of which are required by claim 24 and its dependents as well as claim 169. Ingredients that were further listed in Example 2 that are encompassed by the claims include an ATP regeneration system (e.g., phosphocreatine with creatine kinase and/or nucleoside diphosphokinase) (recited in claims 148, 151 and 152); inorganic pyrophosphatase (recited in claim 148 and 150), T7 SSB (encompassed by the "single stranded binding protein" of claim 141); and T7 DNA ligase (recited in claim 148, 153 and 154).

The Combination of Scherzinger with Sorge fails to Support Obviousness of a Method Without Exogenous Primers That Includes a DNA Polymerase With Reduced 3'-5' Exonuclease Activity.

Claims 11, 24 and 132 each require a exogenous primer-free amplification system that includes a DNA polymerase having reduced 3' to 5' exonuclease activity (for example in combination with a DNA polymerase having normal 3'-5' exonuclease activity). These claims are based at least in part on the surprising and unexpected discovery first reported in the instant application that the inclusion of a DNA polymerase having reduced 3' to 5' exonuclease activity (for example in combination with a DNA polymerase having normal 3'-5' exonuclease activity) in a primer free isothermal reaction mixture results in drastically higher levels of amplification (i.e., much higher levels of amplification than replication reactions that occur with only a DNA polymerase with a normal level of exonuclease activity). Second Tabor Declaration at ¶8.

Neither Scherzinger nor any other cited reference discloses, teaches or suggests a one combination of a DNA polymerase having normal exonuclease activity with a DNA polymerase having reduced exonuclease activity in a constant temperature amplification reaction that is free of exogenously added primers. Second Tabor Declaration, at ¶ 8.

The Examiner's reliance on Sorge fails to cure the deficiencies of Scherzinger with respect to the combination of DNA polymerases. In particular, Sorge clearly indicates that the mechanism by which the combination works to increase DNA synthesis is dependant on the interaction of the polymerases with the DNA polymerases, for example by stating:

“the composition is especially useful in DNA synthesis when there exists one or more mismatched nucleotide(s), particularly mismatches at the 3' end of one or more synthesis primer(s). In such situations, the results achieved, i.e., the amount of synthesis product produced, are significantly greater than the amount of synthesis product obtained using either a DNA polymerase with less 3'-5' exonuclease activity than the enzyme possessing substantial 3'-5' exonuclease activity or with a DNA polymerase possessing substantial 3'-5' exonuclease activity alone.”

Sorge at column 3, lines 10-22, see also Second Tabor Declaration at ¶ 9. Accordingly, because Sorge clearly indicates that the reasons for using a combination of DNA polymerases are based on exogenously added primers, the disclosures of Sorge would provide no motivation to use the combination of DNA polymerases in the exogenous primer-free systems of Scherzinger or the instantly claimed methods. Second Tabor Declaration at ¶ 9.

Applicant's Responses to Specific Rejections

Rejection Claims 1, 11, 129-139, 141-147, 156, and 165

The rejection of claims 1, 11, 129-139, 141-147, 156, and 165 under 35 USC § 103(a) as allegedly being obvious over Scherzinger et al. (European Journal of Biochemistry (1977) 72: 543-558) in view of Sorge et al. (US 5,556,772) and further in view of Tabor et al. (Journal of Biological Chemistry (1989), 264(11): 6447-6458) is respectfully traversed.

The combination of Scherzinger and Sorge fails to establish obviousness of the claims at least for the reasons described above. The Examiner's further reliance on Tabor et al. is unable to remedy the deficiencies of Scherzinger et al. and Sorge et al. at least because Tabor fails to disclose any methods in which DNA is amplified at least at least 10-, 100- (See claim 1), 1,000-, 1,000,000- or 10,000,000-fold using an isothermal, primer-free reaction system. Moreover neither Scherzinger et al. nor Sorge et al. teach, disclose or suggest any exogenous primer-free amplification system that that includes a DNA polymerase modified to have reduced 3' to 5' exonuclease activity as required by claim 11.

Accordingly, Applicant respectfully requests that the rejection be reconsidered and withdrawn.

Claims 24 and 160

The rejection of claims 24 and 160 under 35 USC § 103(a) as allegedly being obvious over Scherzinger et al. in view of Sorge et al. and further in view of Bernstein et al. (Proceedings of National Academy of Sciences (1988), 85: 396-400) is respectfully traversed.

Instant claim 24 is directed to an isothermal method of amplifying a template DNA molecule comprising incubating the template DNA molecule in an *in vitro* reaction mixture comprising a wild-type T7 DNA polymerase and a T7 DNA polymerase modified to have reduced 3' to 5' exonuclease activity to produce amplified product, wherein production of amplified product does not require exogenously-added oligonucleotide primers and the amount of amplified product is at least 10-fold greater than the amount of template DNA put into the mixture. Claim 24 also specifically requires inclusion of a 63-kDa form of a gene 4 protein from bacteriophage T7 and a single-stranded DNA binding protein from *Escherichia coli* in the reaction mixture.

The combination of Scherzinger and Sorge fails to establish obviousness of the claims for at least the reasons explained above. Bernstein fails to disclose any methods in which DNA is amplified at least at least 10-fold using an isothermal, primer-free reaction system that includes a DNA polymerase with a normal level of exonuclease activity and a DNA polymerase modified to have reduced 3' to 5' exonuclease activity, therefore, fails to cure the deficiencies of Scherzinger and Sorge.

Accordingly, Applicant respectfully requests that the rejection be reconsidered and withdrawn.

Rejection of Claims 124-128, 157-159, 166, and 168

The rejection of claims 124-128, 157-159, 166, and 168 under 35 USC § 103(a) as allegedly being obvious over Scherzinger et al. in view of Sorge et al. and further in view of Tabor et al. and Walker et al. (Nucleic Acids Research (1992), 20(7): 1691-1696 is respectfully traversed.

For at least the reasons described above, the combination of Scherzinger et al., Sorge et al., or Tabor et al. alone and in combination fail to render the instant claims obvious at least because they disclose, teach or suggest any method of isothermally amplifying a template DNA

in a reaction mixture is at least 100-fold greater than the amount of template DNA put into the reaction mixture as required by the instant claims.

Walker et al. fails to cure the deficiencies of Scherzinger et al., Sorge et al, and Tabor et al. In particular, the methods disclosed in Walker, like those of Sorge, require the addition of exogenously added primers. See Walker at page 1691, right column, lines 15-16. Accordingly, Walker does nothing to cure the lack of motivation to combine primer-based amplification reactions with primer-free DNA replication reactions disclosed in Scherzinger.

Moreover, even if there was motivation to combine and modify the methods of the cited art, there would be no reasonable expectation that any such method could possibly yield the amounts of amplified product required by the instant claims without the use of exogenously added primers. Instant claims 124-128, 157-159, 166, and 168 require a 100-10,000,000-fold amplification or that the amplification is exponential. Thus, modifying the Scherzinger method such as to arrive at the instant claims would require amplifying more than **25-times** the DNA amplified by the Scherzinger method (achieving the levels required by claim 127 would require improving the Scherzinger method such as to achieve more than **2.5-million times** the amount of DNA) (See Tabor Declaration # 2 at ¶¶ 6-10). Accordingly, without the benefit of the data presented in the instant application, there is absolutely no expectation that the Scherzinger method could be “optimized” such as to result in the amplification levels required by the instant claims.

With regard to claims 157-159, Walker also does nothing to cure the deficiencies of Scherzinger and Sorge with regard to the claim requirement to include a DNA polymerase modified to have reduced 3' to 5' exonuclease activity in a reaction system that does not require exogenously added primers.

Accordingly, Applicant respectfully requests that the rejection be reconsidered and withdrawn.

Rejection of Claims 148 and 149

The rejection of claims 148 and 149 under 35 USC § 103(a) as allegedly being obvious over Scherzinger et al. in view of Sorge et al. and further in view of Tabor et al., and Dickinson (Journal of Cell Sciences (1983) 60: 355-365) is respectfully traversed.

As discussed above, the combination of Scherzinger et al., Sorge et al., and Tabor et al. fail to render the instant claims obvious. The Examiner relies on Dickinson to allegedly provide the use of diphosphokinase in the amplification reaction. Dickenson fails to disclose any methods in which DNA is amplified at least at least 10-fold using an isothermal, primer-free reaction system that includes a DNA polymerase with a normal level of exonuclease activity and a DNA polymerase modified to have reduced 3' to 5' exonuclease activity, therefore, fails to cure the deficiencies of Scherzinger et al., Sorge et al., and Tabor. Moreover, the Examiner fails to establish any motivation to include difructokinase in the specific combination of elements required by the instant claims.

Accordingly, Applicant respectfully requests that the rejection be reconsidered and withdrawn.

Rejection of Claims 148 and 150

The rejection of claims 148 and 150 under 35 USC § 103(a) as allegedly being obvious over Scherzinger et al. in view of Sorge et al. and further in view of Tabor et al., and Peller et al. (Biochemistry (1977) 16(3): 387-395) is respectfully traversed.

As discussed above, the combination of Scherzinger et al., Sorge et al., and Tabor et al. fail to render the instant claims obvious. The Examiner relies on Peller to allegedly provide the use of inorganic pyrophosphatase in the amplification reaction. Peller fails to disclose any methods in which DNA is amplified at least at least 10-fold using an isothermal, primer-free reaction system that includes a DNA polymerase with a normal level of exonuclease activity and a DNA polymerase modified to have reduced 3' to 5' exonuclease activity, therefore, fails to cure the deficiencies of Scherzinger et al., Sorge et al., and Tabor. Moreover, the Examiner fails to

establish any motivation to include inorganic pyrophosphatase in the specific combination of elements required by the instant claims.

Accordingly, Applicant respectfully requests that the rejection be reconsidered and withdrawn.

Rejection of Claims 148, 151, and 152

The rejection of claims 148, 151, and 152 under 35 USC § 103(a) as allegedly being obvious over Scherzinger et al. in view of Sorge et al. and further in view of Tabor et al., and Nakai et al. (The Journal of Biological Chemistry (1993) 268(32): 23997-24004) is respectfully traversed.

As discussed above, the combination of Scherzinger et al., Sorge et al., and Tabor et al. fail to render the instant claims obvious. The Examiner relies on Naki to allegedly provide the use of an ATP regeneration system that includes phosphocreatine and creatine kinase in the amplification reaction. Nakai fails to disclose any methods in which DNA is amplified at least at least 100-fold using an isothermal, primer-free reaction system, therefore, fails to cure the deficiencies of Scherzinger et al., Sorge et al., and Tabor. Moreover, the Examiner fails to establish any motivation to include an ATP regeneration system that includes phosphocreatine and creatine kinase in the specific combination of elements required by the instant claims.

Accordingly, Applicant respectfully requests that the rejection be reconsidered and withdrawn.

Rejection of Claims 153, and 154

The rejection of claims 153 and 154 under 35 USC § 103(a) as allegedly being obvious over Scherzinger et al. in view of Sorge et al. and further in view of Tabor et al., and Engler et al. (The Journal of Biological Chemistry (1983) 258(18): 11197-11205) is respectfully traversed.

As discussed above, the combination of Scherzinger et al., Sorge et al., and Tabor et al. fail to render the instant claims obvious. The Examiner relies on Engler to allegedly provide the use of T7 ligase in the amplification reaction. Engler fails to disclose any methods in which DNA is amplified at least at least 100-fold using an isothermal, primer-free reaction system, therefore, fails to cure the deficiencies of Scherzinger et al., Sorge et al., and Tabor. Moreover, the Examiner fails to establish any motivation to include T7 ligase in the specific combination of elements required by the instant claims.

Accordingly, Applicant respectfully requests that the rejection be reconsidered and withdrawn.

Rejection of Claim 155

The rejection of claim 155 under 35 USC § 103(a) as allegedly being obvious over Scherzinger et al. in view of Sorge et al. and further in view of Tabor et al., and Jarvis et al. (The Journal of Biological Chemistry (1990) 265(25): 15160-15167) is respectfully traversed.

As discussed above, the combination of Scherzinger et al., Sorge et al., and Tabor et al. fail to render the instant claims obvious. The Examiner relies on Jarvis to allegedly provide the use of PEG and Dextran in the amplification reaction. Jarvis fails to disclose any methods in which DNA is amplified at least at least 100-fold using an isothermal, primer-free reaction system, therefore, fails to cure the deficiencies of Scherzinger et al., Sorge et al., and Tabor. Moreover, the Examiner fails to establish any motivation to include PEG and Dextran in the specific combination of elements required by the instant claims.

Accordingly, Applicant respectfully requests that the rejection be reconsidered and withdrawn.

Rejection of Claims 161-164, and 169

The rejection of claims 161-164, and 169 under 35 USC § 103(a) as allegedly being obvious over Scherzinger et al. in view of Sorge et al. and further in view of Tabor et al., Bernstein et al., and Walker et al. is respectfully traversed.

As discussed above, the combination of Scherzinger et al., Sorge et al., and Tabor et al. fail to render the instant claims obvious. Neither Bernstein nor Walker, alone or in combination disclose, teach or suggest any methods in which DNA is amplified at least at least 10-fold using an isothermal, primer-free reaction system that includes a DNA polymerase with a normal level of exonuclease activity and a DNA polymerase modified to have reduced 3' to 5' exonuclease activity, therefore, the combination of Bernstein nor Walker fails to cure the deficiencies of Scherzinger et al., Sorge et al., and Tabor.

Accordingly, Applicant respectfully requests that the rejection be reconsidered and withdrawn.

Conclusion

As described above, the combination of the references cited by the Examiner fails to adequately support an obviousness rejection of the instant claims.

The Examiner is invited to contact the undersigned by telephone if any issue remains to be resolved in view of this communication so that a prompt disposition of the application can be achieved.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely

acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date 11/23/09

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